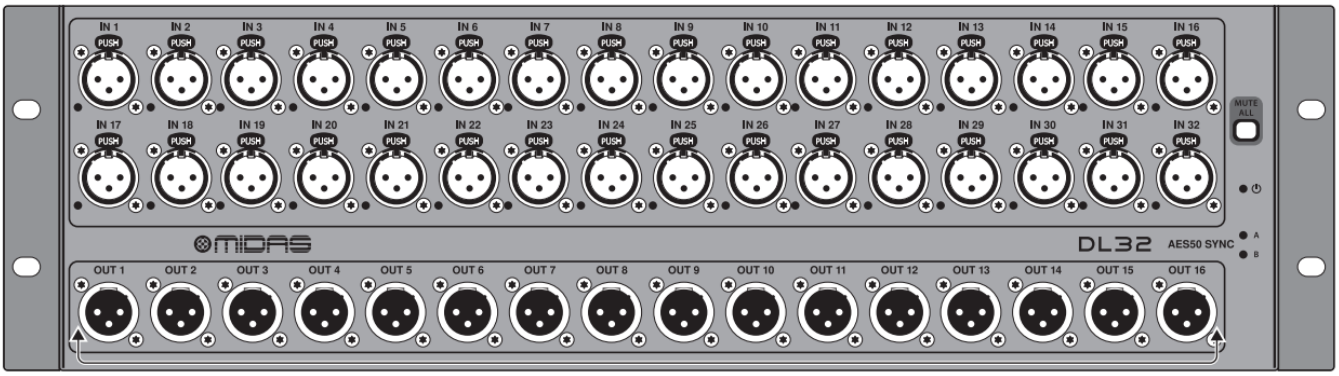
Manuals+ — User Manuals Simplified.

MIDAS DL32 32-Input- 16-Output Stage Box User Guide

Quick Start Guide



DL32
32 Input, 16 Output Stage Box with 32 Midas Microphone Preamplifiers, ULTRANET, and ADAT Interfaces
V 1.0

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Important Safety Instructions

Terminals marked with this symbol carry an electrical current of sufficient magnitude to constitute risk of electric shock.
Use only high-quality professional speaker cables with ¼" TS or twist-locking plugs pre-installed. All other installations or modifications should be performed only by qualified personnel.

This symbol, wherever it appears, alerts you to the presence of uninsulated dangerous voltage inside the enclosure – voltage that may be sufficient to constitute a risk of shock.

This symbol, wherever it appears, alerts you to important operating and maintenance instructions in the accompanying literature. Please read the manual.

Caution
To reduce the risk of electric shock, do not remove the top cover (or the rear section).
No user-serviceable parts inside. Refer servicing to qualified personnel.

Caution
To reduce the risk of fire or electric shock, do not expose this appliance to rain and moisture. The apparatus shall not be exposed to dripping or splashing liquids and no objects filled with liquids, such as vases, shall be placed on the apparatus.

Caution
These service instructions are for use by qualified service personnel only.
To reduce the risk of electric shock do not perform any servicing other than that contained in the operation instructions. Repairs have to be performed by qualified service personnel.

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.

4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for the replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Use only attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. The apparatus shall be connected to a MAINS socket outlet with a protective earthing connection.
16. Where the MAINS plug or an appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.
17. Correct disposal of this product: This symbol indicates that this product must not be disposed of with household waste, according to the WEEE Directive (2012/19/EU) and your national law. This product should be taken to a collection center licensed for the recycling of waste electrical and electronic equipment (EEE). The mishandling of this type of waste could have a possible negative impact on the environment and human health due to potentially hazardous substances that are generally associated with EEE. At the same time, your cooperation in the correct disposal of this product will contribute to the efficient use of natural resources. For more information about where you can take your waste equipment for recycling, please contact your local city office or your household waste collection service.
18. Do not install in a confined space, such as a bookcase or similar unit.
19. Do not place naked flame sources, such as lighted candles, on the apparatus.
20. Please keep the environmental aspects of battery disposal in mind. Batteries must be disposed of at a battery collection point.
21. This apparatus may be used in tropical and moderate climates up to 45°C.

LEGAL DISCLAIMER

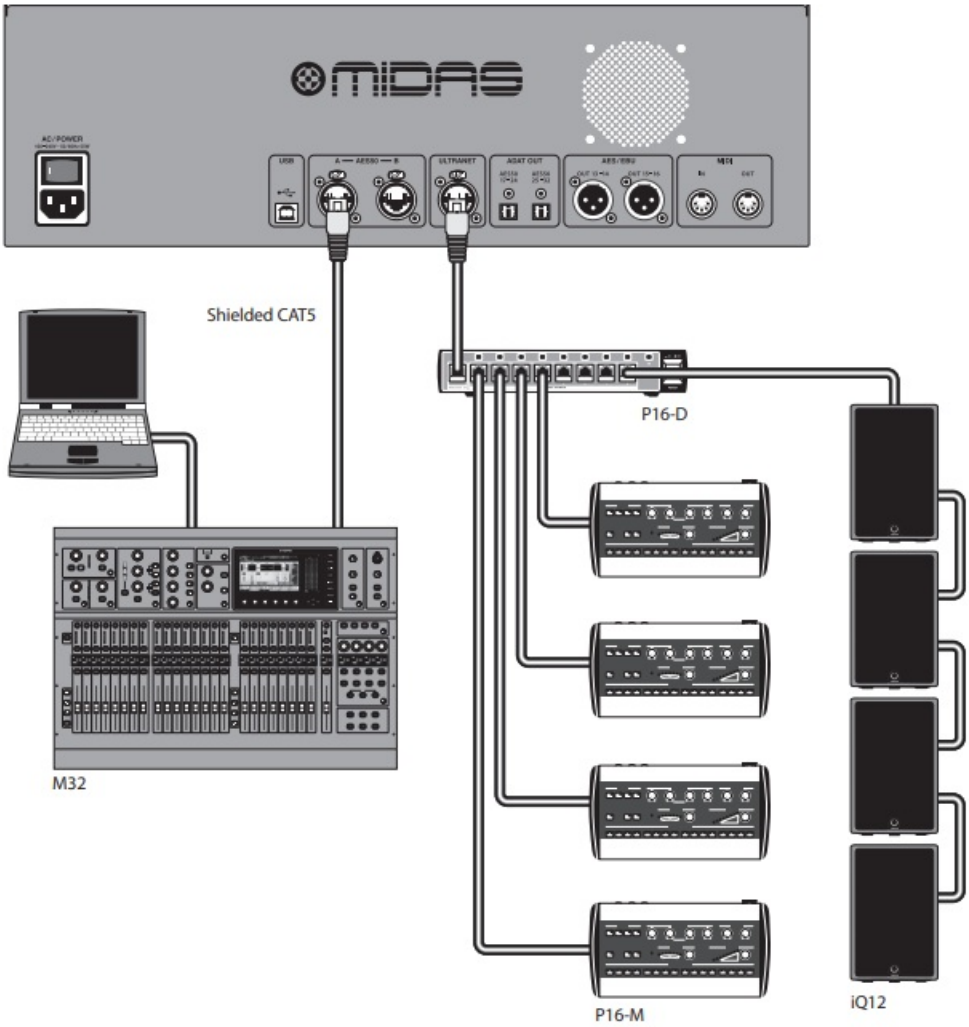
Music Tribe accepts no liability for any loss which may be suffered by any person who relies either wholly or in part upon any description, photograph, or statement contained herein. Technical specifications, appearances, and other information are subject to change without notice. All trademarks are the property of their respective owners. Midas, Klark Teknik, Lab Gruppen, Lake, Tannoy, Turbosound, TC Electronic, TC Helicon, Behringer, Bugera, Aston Microphones and Coolaudio are trademarks or registered trademarks of Music Tribe Global Brands Ltd. © Music Tribe Global Brands Ltd. 2021 All rights reserved.

LIMITED WARRANTY

For the applicable warranty terms and conditions and additional information regarding Music Tribe's Limited Warranty, please see complete details online at **musictribe.com/warranty.**

DL32 Hook-up

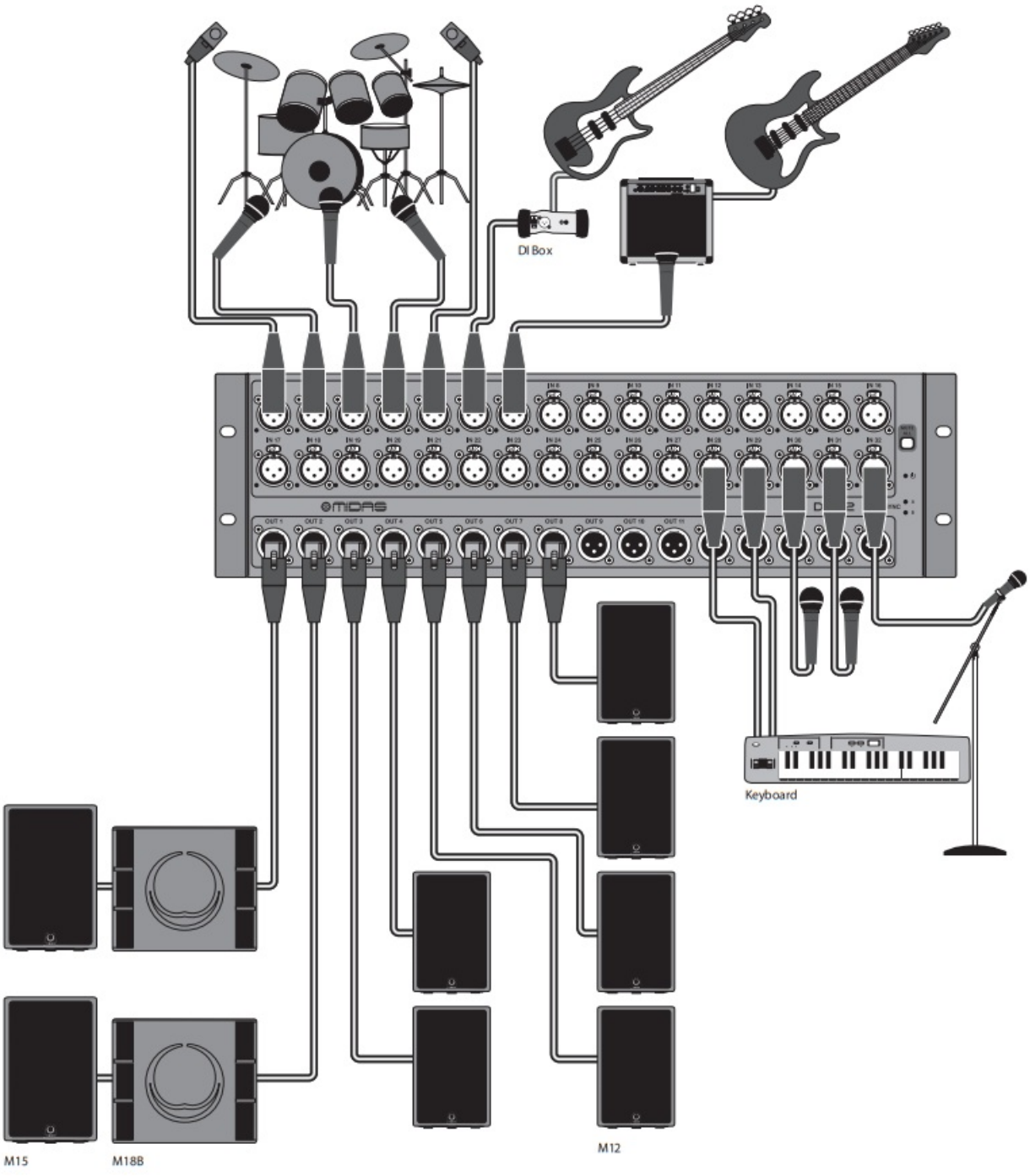
DL32 rear panel connections



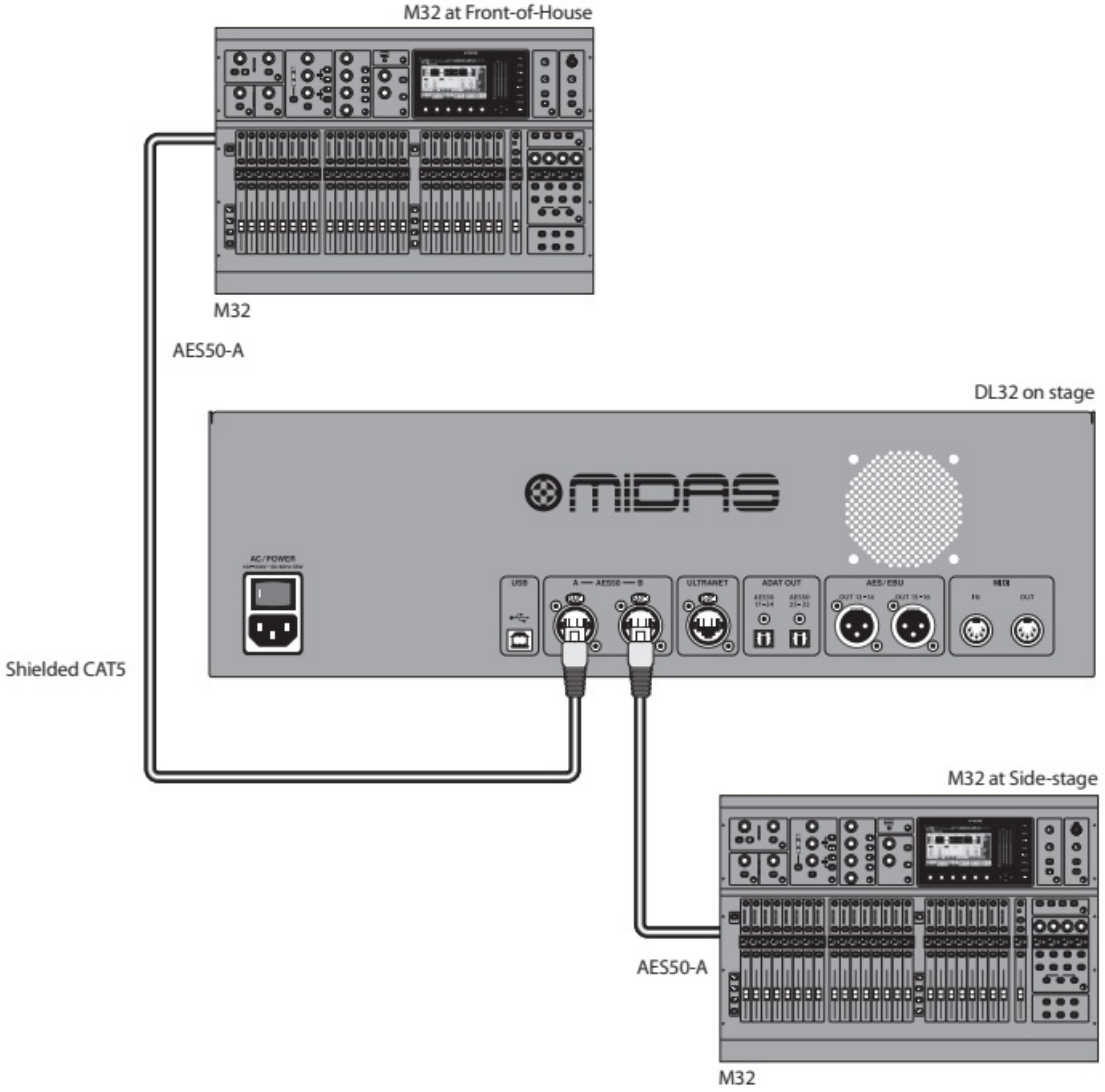
Cabling for all AES50 connections between M32 and DL32 stageboxes:

- Shielded CAT-5e, Ethercon terminated ends
- Maximum cable length 100 meters (330 feet)

DL32 common connections



DL32 between two M32 consoles



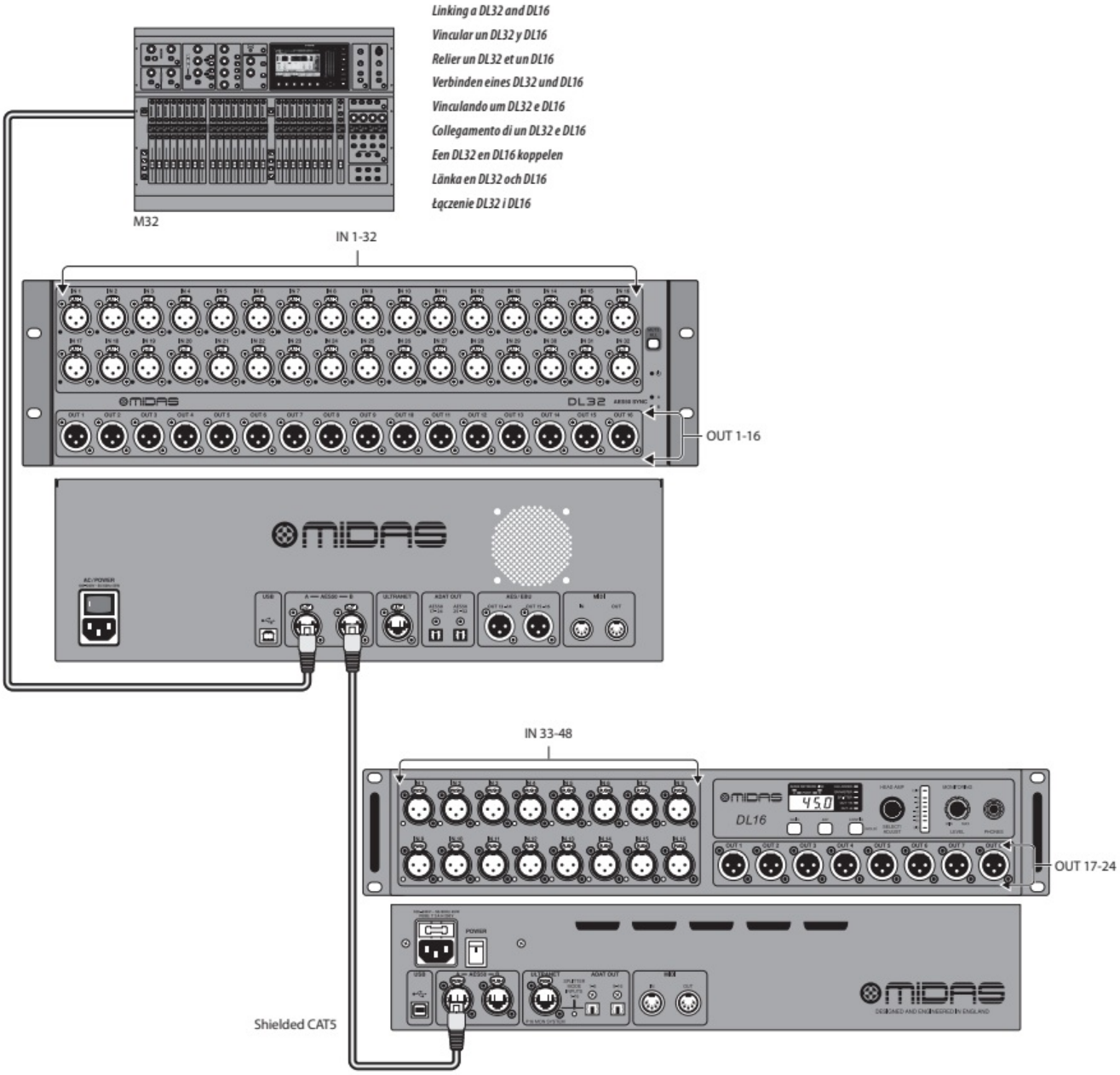
DL32 with two consoles:

DL32 Digital Stage Box

from stage A	A	DL32		B	to FOH A
1-8	1-8	Local In 1-8		1-8	1-8
9-16	9-16	Local In 9-16		9-16	9-16
17-24	17-24	Local In 17-24		17-24	17-24
25-32	25-32	Local In 25-32		25-32	25-32
33-40	33-40			33-40	33-40
41-48	41-48			41-48	41-48
RX	TX			RX	TX

Mixing Console FOH (clock master)					Mixing Console Stage (sync slave)
	TX	RX		TX	RX
to stage A	A	DL32		B	A
1-8	1-8	XLR OUT 1-8	Local In 1-8	1-8	1-8
9-16	9-16	XLR OUT 9-16	Local In 9-16	9-16	9-16
17-24	17-24	ADAT OUT 17-24	Local In 17-24	17-24	17-24
25-32	25-32	ADAT OUT 25-32	Local In 25-32	25-32	25-32
33-40	33-40	P16 OUT 1-8		33-40	33-40
41-48	41-48	P16 OUT 9-16		41-48	41-48

Linking a DL32 and DL16



DL32 with DL16 and console:

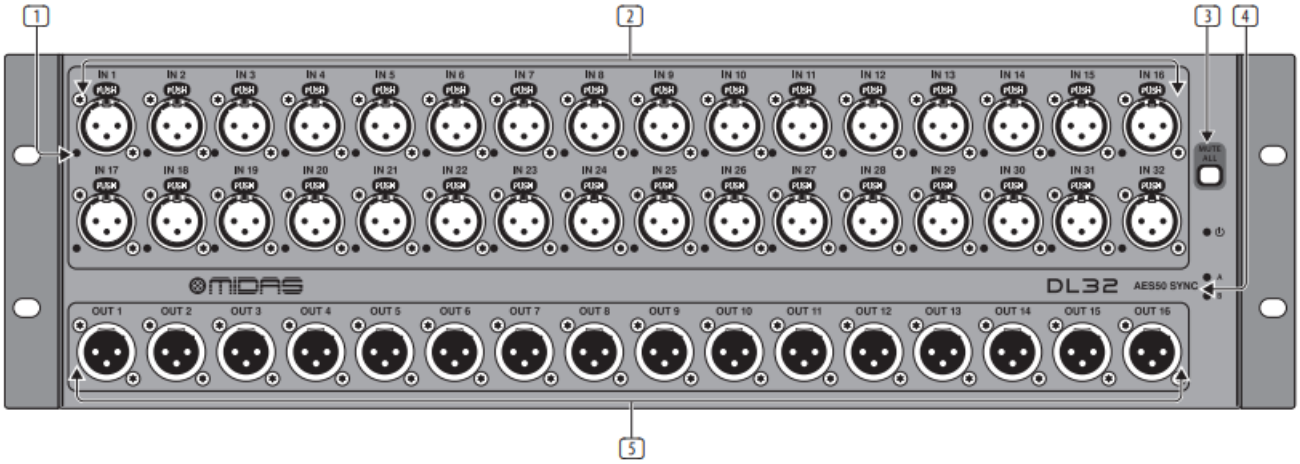
DL32 Digital Stage Box

from stage	A	A	DL32	B	A	DL16-2-(Out 17-24)	B
	1-8	1-8	Local In 1-8	1-8	1-8	Local In 1-8	1-8
	9-16	9-16	Local In 9-16	9-16	9-16	Local In 9-16	9-16
	17-24	17-24	Local In 17-24	17-24	17-24		17-24
	25-32	25-32	Local In 25-32	25-32	25-32		25-32
	33-40	33-40		33-40	33-40		33-40
	41-48	41-48		41-48	41-48		41-48
		TX		RX	TX		RX

Mixing Console FOH (clock master)		RX		TX	RX		TX
to stage	A	A	DL32	B	A	DL16-2-(Out 17-24)	B
	1-8	1-8	XLR OUT 1-8	1-8	1-8		1-8
	9-16	9-16	XLR OUT 9-16	9-16	9-16		9-16
	17-24	17-24	ADAT OUT 17-24	17-24	17-24	XLR OUT 1-8	17-24
	25-32	25-32	ADAT OUT 25-32	25-32	25-32	ADAT OUT 25-32	25-32
	33-40	33-40	P16 OUT 1-8	33-40	33-40	P16 OUT 1-8	33-40
	41-48	41-48	P16 OUT 9-16	41-48	41-48	P16 OUT 9-16	41-48

Note: The signals on both units are fully defined on the M32's 'Routing/AES50 Output' page.

DL32 Controls



Controls

1. PHANTOM LEDs light when 48V supply voltage is engaged for a particular channel.
2. Midas-designed mic/line inputs accept balanced XLR male plugs.
3. MUTE ALL button mutes all inputs for safely connecting and disconnecting cables while the PA system is still on. Keep the button depressed while patching cables on XLR inputs 1-32. The button's red light will turn off shortly after releasing it, indicating that the inputs are now active again.
4. AES50 SYNC LEDs indicate proper clock synchronization on either AES50 port with a green light. A red light indicates the AES50 connection is not synchronized, and off indicates AES50 is not connected.
5. XLR outputs 1-16 accept female balanced XLR plugs and provide the signals 1-16 of AES50 port A.
6. The POWER switch turns the unit on and off.
7. The USB input accepts a USB type-B plug for firmware updates via PC.
8. AES50 ports A and B allow connection to a SuperMAC digital multi-channel network via shielded Cat-5e Ethernet cable with terminated ends compatible to Neutrik etherCON. NOTE: The clock master, typically the digital mixer, must be connected to the AES50 port A, while additional stage boxes would be connected to port B.
9. ULTRANET port provides the 16 AES50 channels 33-48 on a single shielded CAT5 cable to a Behringer P16 personal monitoring system.
10. ADAT OUT jacks send AES50 channels 17-32 to external equipment via optical cable.

11. AES/EBU outputs send the AES50 channels 13/14 and 15/16 to devices with digital inputs. (12) MIDI IN/OUT jacks accept standard 5-pin MIDI cables for MIDI communication to and from an M32 console.

DL32 Output Configuration

DL32 Output Signals

Outputs > mixer:	44.1/48 kHz clock s ync	Analog XLR out 1-16	AES/EBU (AES 3)
connected to DL32 port A	AES50 port A	= AES50-A, ch01-ch16	= AES50-A ch13-ch14 ch15-c

Specifications

Processing

A/D-D/A conversion (Cirrus Logic A/D CS5368, D/A CS4398)
Networked I/O latency (stagebox in > console processing* > stagebox out)

Connectors

Programmable Midas mic preamps, balanced XLR	32
Line outputs, balanced XLR	16
AES/EBU outputs (AES3 XLR)	2
AES50 ports, SuperMAC networking, NEUTRIK etherCON	2
ULTRANET output, RJ45 (no power supplied)	1
MIDI inputs / outputs	1/
ADAT outputs, Toslink	2
USB port for system updates, type B	1

Mic Input Characteristics (Midas PRO)

Input impedance, XLR	10 kΩ
Non clip maximum input level, XLR	+23.5 dBu
THD + noise, unity gain, 0 dBu out	< 0.01%, unweighted
THD + noise, +45 dB gain, 0 dBu out	< 0.03%, unweighted
Phantom power, switchable per input	48 V
Equivalent input noise @ +45 dB gain, (150 Ω source)	< -126 dBu, 22 Hz – 22 kHz, unweight
CMRR @ 1 kHz, unity gain (typical)	> 70 dB
CMRR @ 1 kHz, +45 dB gain (typical)	> 90 dB

Input/Output Characteristics

Frequency response @ 48 kHz sample rate, at any gain	20 Hz – 20 kHz, 0 dB to -1 dB
Dynamic range, analog mic in to analog out	107 dB, 22 Hz – 22 kHz, unweighted
A/D dynamic range, mic preamp to converter	109 dB, 22 Hz – 22 kHz, unweighted
D/A dynamic range, converter, and output	110 dB, 22 Hz – 22 kHz, unweighted
Crosstalk rejection @ 1 kHz, adjacent channels	100 dB

Output Characteristics

Output impedance, XLR	50 Ω
Maximum output level, XLR	+21 dBu
Residual noise level, unity gain, XLR	< -86 dBu, 22 Hz – 22 kHz, unweighted
Residual noise level, muted, XLR	< -100 dBu, 22 Hz – 22 kHz, unweighted

Digital In/Out

AES50 SuperMAC networking @ 48 or 44.1 kHz, 24-bit PCM	2 x 48 channels, bidirectional
AES50 SuperMAC cable length, CAT5e shielded**	up to 100 m
ULTRANET networking @ 48 or 44.1 kHz, 22-bit PCM	1 x 16 channels, unidirectional
ULTRANET cable length, CAT5 shielded	up to 75 m
ADAT output @ 48 or 44.1 kHz, 24-bit PCM	2 x 8 channels, unidirectional
Toslink optical, cable length	5 m, typical
AES/EBU output @ 48 or 44.1 kHz, 24-bit PCM	2 x 2 channels, unidirectional
XLR, 110 Ω balanced, cable length	5 m, typical

Power

Switch-mode autorange power supply	100-240 V (50/60 Hz)
Power consumption	55 W

Physical

Standard operating temperature	5°C to 40°C (41°F to 104°F)
Dimensions	483 x 242 x 138 mm (19 x 9.5 x 5.4″)
Weight	5.7 kg (12.5 lbs)

*incl. all channel and bus processing, excl. insert effects and line delays
**Klark Teknik NCAT5E-50M recommended
NOTE: Please verify that your specific AES50 connections provide stable operation prior to using the products in a live performance or recording situation. The maximum distance for AES50 CAT5 connections is 100 m / 330 ft. Please consider using shorter connections where possible for gaining safety margin. Combining 2 or more cables with extension connectors can reduce the reliability and maximum distance between AES50 products. Unshielded (UTP) cable may work well for many applications, but entails an additional risk for ESD issues.
We guarantee, that all our products will perform as specified with 50 m of Klark Teknik NCAT5E-50M, and we recommend using cable of similar quality, only. Klark Teknik also offers the very cost-effective DN9610 AES50 Repeater or DN9620 AES50 Extender for situations where extremely long cable runs are required.

Other important information

1. Register online. Please register your new Music Tribe equipment right after you purchase it by visiting musictribe.com. Registering your purchase using our simple online form helps us to process your repair claims more quickly and efficiently. Also, read the terms and conditions of our warranty, if applicable.
2. Malfunction. Should your Music Tribe Authorized Reseller not be located in your vicinity, you may contact the Music Tribe Authorized Fulfiller for your country listed under “Support” at musictribe.com. Should your country not be listed, please check if your problem can be dealt with by our “Online Support” which may also be found under “Support” at musictribe.com. Alternatively, please submit an online warranty claim at musictribe.com BEFORE returning the product.
3. Power Connections. Before plugging the unit into a power socket, please make sure you are using the correct mains voltage for your particular model. Faulty fuses must be replaced with fuses of the same type and rating without exception.

FEDERAL COMMUNICATIONS COMMISSION COMPLIANCE INFORMATION

Midas
DL32

Responsible Party Name:	**Music Tribe Commercial NV Inc.**
Address:	**5270 Procyon Street, Las Vegas NV 89118, United States**
Phone Number:	**+1 702 800 8290**

DL32

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

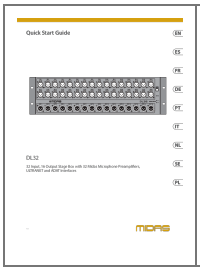
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:
(1) this device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.
Important information:
Changes or modifications to the equipment not expressly approved by Music Tribe can void the user's authority to use the equipment.

CE

Hereby, Music Tribe declares that this product is in compliance with Directive 2014/30/EU, Directive 2011/65/EU and Amendment 2015/863/EU, Directive 2012/19/ EU, Regulation 519/2012 REACH SVHC, and Directive 1907/2006/EC.
The full text of the EU DoC is available at **https://community.musictribe.com/**
EU Representative: Music Tribe Brands DK A/S
Address: Ib Spang Olsens Gade 17, DK – 8200 Aarhus N, Denmark

Documents / Resources

	**MIDAS DL32 32-Input- 16-Output Stage Box** [pdf] User Guide DL32, 32-Input- 16-Output Stage Box

References

- Music Tribe
- Music Tribe